Claims 21 and 33 in the above-identified application.

## III. 37 CFR 1.607(a)(3)

All 13 claims in the '327 patent correspond to the proposed count.

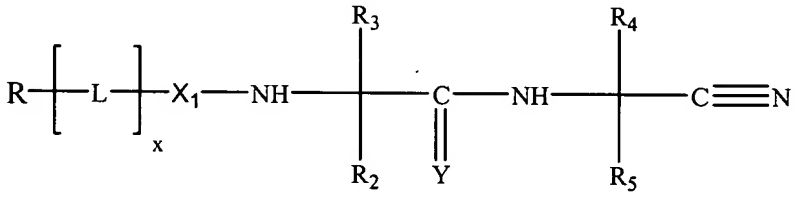
## IV. 37 CFR 1.607(a)(4)

Claims 21-39 of the above-identified application correspond to the proposed count.

## V. 37 CFR 1.607(a)(5)

The terms of the application claims identified as corresponding to the proposed count can be applied to the disclosure of the application as follows:

Claim 21: A compound of formula (I):




(I)

{page 3 second full paragraph}

wherein

R is substituted aryl selected from 4-(morpholin-1-yl)-phen-1-yl, 4-(morpholin-1-yl-methyl)-phen-1-yl, 4-(pyrrolidin-1-yl-methyl)-phen-1-yl), 4-(4-methylpiperazin-1-yl)-phen-1-yl and 4-(piperidinyl)-phenyl {paragraph bridging pages 17 and 18};

$R_2$ and $R_3$ are, independently, hydrogen or lower alkyl {page 3 lines 4 and 5 after the structure}; or

$R_2$ and $R_3$, together, represent lower alkylene, optionally interrupted by O, S or $NR_6$, so as to form a ring with the carbon to which they are attached, and $R_6$ is hydrogen, lower alkyl or aryl-lower alkyl {page 3 lines 6-8 after the structure};

$R_4$ and $R_5$ are, independently, hydrogen or lower alkyl {page 3 line 10 after the structure}; or

$R_4$ and $R_5$, together, represent lower alkylene, optionally interrupted by O, S or $NR_6$, so as to form a ring with the carbon atom to which they are attached, and $R_6$ is hydrogen, lower alkyl or aryl-lower alkyl {page 4 lines 1-3};

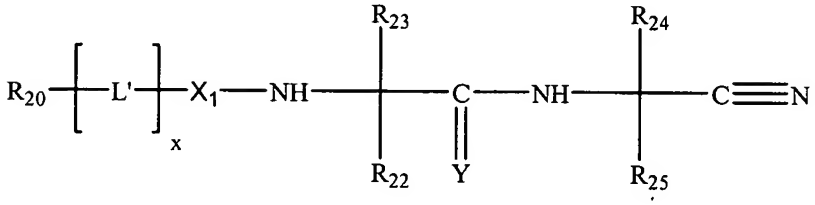
$X_1$ is -C(O)- {page 4 line 19};

Y is oxygen {page 4 line 21}; and

x is zero {page 4 line 5 from the bottom};

or a pharmaceutically acceptable salt thereof {page 3 line 8}.

Claim 22: A compound of formula (II):



(II)

{page 6 bottom}

wherein

$R_{20}$ is substituted aryl selected from 4-(morpholin-1-yl)-phen-1-yl, 4-(morpholin-1-yl-methyl)-phen-1-yl, 4-(pyrrolidin-1-yl-methyl)-phen-1-yl), 4-(4-methylpiperazin-1-yl)-phen-1-yl and 4-(piperidinyl)-phenyl {paragraph bridging page 17 and 18};

$R_{22}$ is hydrogen or lower alkyl and $R_{23}$ is lower alkyl {page 7 line 3}; or

$R_{22}$ and $R_{23}$, together with the carbon atom to which they are attached, form a $C_5$-$C_8$ cycloalkyl group or a heterocycloalkyl group of 3-10 ring atoms {page 7 lines 5-6 and, page 8 lines 14-15, and page 19 line 6};

$R_{24}$ and $R_{25}$ are, independently, hydrogen or lower alkyl {page 7 line 7}; or

$R_{24}$ and $R_{25}$, together with the carbon atom to which they are attached, form a $C_3$-$C_7$ cycloalkyl group {page 7 lines 10 and 11 and page 8 lines 23 and 24};

$X_1$ is -C(O)- {page 7 line 12};

Y is oxygen {page 7 line 13}; and

x is zero {page 7 line 16};

or a pharmaceutically acceptable salt thereof {page 6 lines 1 and 2 before the structure}.

Claim 23: A compound according to claim 22, wherein $R_{22}$ and $R_{23}$, together with the carbon to which they are attached, represent a $C_6$ cycloalkyl group {page 8 line 15}.

Claim 24: A compound according to claim 22, wherein $R_{24}$ and $R_{25}$ are both H or $-CH_3$ {page 8 line 20}.

Claim 25: A compound according to claim 22, wherein $R_{24}$ is H and $R_{25}$ is $-CH_2CH(CH_3)_2$ {page 8 lines 25 and 26}.

Claim 26: A method of inhibiting cathepsin activity in a mammal which comprises administering to a mammal in need thereof an effective amount of a compound according to claim 22 {page 8 line 3 and claim 16 at page 140}.

Claim 27: A method of treating a cathepsin-dependent condition in a mammal which comprises administering to a mammal in need thereof an effective amount of a compound according to claim 22 {claim 19 at page 141}.

Claim 28: A method according to claim 27, wherein the condition is selected from inflammation, osteoporosis, rheumatoid arthritis and osteoarthritis {page 28 lines 7 and 12-15and claim 18 at page 141}.

Claim 29: A method of treating a cathepsin-dependent condition in a mammal which comprises administering to a mammal in need thereof an effective amount of a compound according to claim 23 {claim 19 at page 141}.

Claim 30: A method according to claim 29, wherein the condition is selected from inflammation, osteoporosis, rheumatoid arthritis and osteoarthritis {page 28 lines 7 and 12-15and claim 18 at page 141}.

Claim 31: A cathepsin-inhibiting pharmaceutical composition comprising a compound according to claim 22 in combination with a pharmaceutically acceptable carrier {page 26 lines 18-23 and claim 20 at page 141}

Claim 32: A compound according to claim 22, wherein

$X_1$ is -C(O)- {page 7 line 12};

Y is oxygen {page 7 line 13};

x is zero {page 7 line 16};

$R_{22}$ is H {page 7 line 3};

$R_{23}$ is $-CH_2CH(CH_3)_2$ {page 8 line 15}; and

(a) $R_{20}$ is 4-(morpholin-1-ylmethyl)-phen-1-yl; and

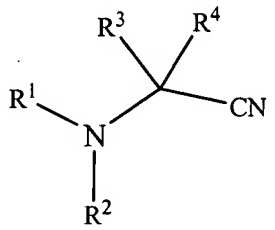
$R_{24}$ and $R_{25}$ are H {Example 24 at page 33}; or

(b) $R_{20}$ is 4-(pyrrolidin-1-ylmethyl)-phen-1-yl; and

$R_{24}$ and $R_{25}$ are H {Example 25 at page 33};

or a pharmaceutically acceptable salt thereof {page 6 lines 1 and 2 before the structure}.

Claim 33: A compound of the formula:



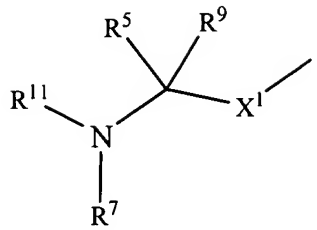

{formula I at the middle of page 3}

wherein

$R^2$ is hydrogen {formula I at page the middle of page 3 (i.e., -NH-};

$R^3$ and $R^4$ are hydrogen {page 3 line 10 after the structure ("$R_4$ and $R_5$ are independently H")};

$R^1$ is a group of formula (a):



(a)

{formula I at the middle of page 3 (= R-[L]-$_x$-$X_1$-NH-C($R_2$)($R_3$)-C(=Y)-)}

wherein

$X^1$ is -C(O)- {formula I at the middle of page 3 (= C(=Y)-)};

$R^5$ is hydrogen or lower alkyl {page 3 line 4 after the structure (= $R_3$)};

$R^9$ is lower alkyl {page 3 line 4 after the structure (= $R_3$)}; or

$R^5$ and $R^9$ together represent lower alkylene optionally interrupted by O, S or $NR^6$, wherein $R^6$ is hydrogen or lower alkyl, so as to form a ring with the carbon atom to which they are attached {page 3 lines 6-8 after the structure (= $R_2$ and $R_3$)};

$R^7$ is hydrogen {formula I at page the middle of page 3 (-NH-)};

$R^{11}$ is $-X^4X^5R^{18}$, wherein $X^4$ is -(C=O)-, $X^5$ is a bond, O or NH, and $R^{18}$ is phenyl substituted by (a) hetero($C_3$-$C_{10}$)cycloalkyl($C_1$-$C_4$)alkyl or (b) hetero($C_3$-$C_{10}$)cycloalkyl {page 2 lines 19-21, page 3 lines 1-6; page 4 line 19; and page 19 lines 1-3 and 5-8 (= $X_1$-[L]-$_x$R)};

or a pharmaceutically acceptable salt thereof {page 3 lines 7-8}.

Claim 34: The compound according to claim 33, wherein $R^{18}$ is substituted phenyl selected from the group consisting of 4-(morpholin-1-yl)-phen-1-yl, 4-(morpholin-1-ylmethyl)-phen-1-yl, 4-(pyrrolidin-1-ylmethyl)-phen-1-yl, 4-(4-

methylpiperazin-1-yl)-phen-1-yl and 4-(piperidinyl)phenyl {paragraph bridging pages 17 and 18}.

Claim 35: A pharmaceutical composition comprising a therapeutically effective amount of a compound according to claim 33 in combination with a pharmaceutically acceptable excipient {page 26 fourth and fifth complete paragraphs}.

Claim 36: A method of treating a disease in a mammal in which cathepsin K contributes to the pathology and/or symptomatology of the disease, which method comprises administering to the mammal a therapeutically effective amount of a compound according to claim 33 {page 2 first and second complete paragraphs and page 28 first and second complete paragraphs}.

Claim 37: The method according to claim 36, wherein the disease is osteoporosis {page 22 line 12}.

Claim 38: The method according to claim 36, wherein the mammal is a human {page 26 line 20}.

Claim 39: The method according to claim 36, wherein the human is a post-menopausal woman {page 22 line 23}.

## VI. 37 CFR 1.607(a)(6)

The '327 patent issued on July 15, 2003. The pending claims of the present application were submitted concurrently herewith. Hence, they were presented prior to one year from the date on which the '327 patent was granted, and 35 USC 135(b)(1) has thus been satisfied.

The '327 patent issued from U.S. application serial No. 10/017,851 (hereinafter referred to as "the '851 application"). The '851 application was published as U.S. 2002/0086996 (hereinafter referred to as "the '996 publication") on July 4, 2002.

Claims 21-39 submitted herewith are the same as claims 21-39 submitted in the parent application serial No. 10/342,872 (hereinafter referred to as "the '872 application"), with the following exceptions: (a) claim 24 has been amended to delete the comma after "$R_{25}$"; (b) claim 27 has been amended to recite "the compound as defined in claim 22"; (c) claims 28 and 30 have been amended to recite "wherein the condition is selected from"; (d) claim 33 has been amended to narrow the definition of $R^{18}$; (e) claim 34 has been amended to recite proper Markush terminology; and (f) claim 36 has been amended to delete "or a pharmaceutically acceptable salt or ester thereof." Claims 21-39 were submitted in the parent application on July 3, 2002. Since those claims were presented prior to one year from the date on which the '851 application was published and claims 21-39 of the present application are directed to the even narrower subject matter, 35 USC 135(b)(2) has thus been satisfied.

## VII. REQUEST FOR THE BENEFIT OF THE FILING DATES OF APPLICANT(S) PRIORITY APPLICATIONS

Applicants claim priority under 35 USC 120 based upon (1) "the '872 application"), which was filed on January 15, 2003; (2) U.S. application serial No. 10/054,590 (hereinafter referred to as "the '590 application"), which was filed on January 22, 2002; (3) U.S. application serial No. 09/643,639 (hereinafter referred to as "the '639 application"), which was filed on August 22, 2000; and (4) U.S. application serial No. 09/186,223 (hereinafter referred to as "the '223 application"), which was filed on November 4, 1998.

Applicants are entitled to the benefit of the filing dates of their earlier filed application for interference purposes if the count reads on at least one adequately disclosed embodiment in the earlier application.[1] Assuming that the examiner recommends to the board applicants' proposed count, applicants clearly meet that standard. That this is so is demonstrated from the fact that the present application is a continuation application from the '872 application, which in turn is a continuation application from the '590 application, which in turn is a continuation application from the '639 application, which in turn is a continuation application from the '223 application. Consequently, applicants' earlier filed applications have the same disclosure as the present application, and the application of the terms of the claims to the disclosure in Section V herein is equally applicable to the disclosures of the prior applications identified above.

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[1] Weil v. Fritz, 572 F.2d 856, 865-66 n.16, 196 USPQ 600, 608 n.16 (CCPA 1978).

Applicants also claim priority under 35 USC 119 based upon Great Britain application No. 9723407.4 (hereinafter referred to as "the '407 application"), filed on November 5, 1997. The '407 application discloses the specific compounds listed in the following table which fall within the scope of the claims of the present application.

| Example in the Above-Identified Application | Corresponding Example in the '407 Application |
|---|---|
| 24 | 35 |
| 25 | 36 |
| 28 | 39 |
| 29 | 40 |
| 70 | 48 |
| 71 | 49 |
| 76 | 54 |
| 77 | 55 |

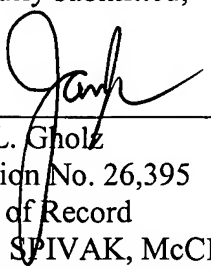
Examples 24, 25, 28, and 29 fall within the scope of claims 21 and 33 of the present application. Examples 70, 71, 76, and 77 fall within the scope of claim 21 but not claim 33 of the present application. Accordingly, Applicants are entitled to the benefit of the filing date of the '407 application.

## VIII. 37 CFR 1.608

37 CFR 1.608 is irrelevant since the effective filing date of this application (November 5, 1997) precedes the effective filing date of the '327 patent (March 15, 2000).

For the foregoing reasons, the party Altmann et al. should be the senior party in the requested interference.

Respectfully submitted,



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